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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,437	10/16/2003	Gabor Szalai	9001-1005	5805

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EXAMINER	
ROSENBERG, LAURA B	

ART UNIT	PAPER NUMBER
3616	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/685,437	SZALAI ET AL.	
	Examiner	Art Unit	
	Laura B. Rosenberg	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because figures 2 and 3 show different embodiments, and different reference characters should be used unless the components are the same. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because the specification uses the phrases "portal arrangement", "portal drive", and "portal drive houses" to describe what appears to be an inverted portal or low-floor arrangement. Appropriate correction is required.

Claim Objections

6. Claims 1 and 7 are objected to because of the following informalities:

"characterised" should be changed to characterized (claim , line 10);

the term "it" should be avoided since there is difficulty in determining what "it" refers to (claim 7, line 4).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "portal" in claims 1, 3, 6, 8, and 10 is used by the claim to mean "low floor", while the accepted meaning is "raised floor." The term is indefinite because the specification does not clearly redefine the term. The dictionary definition of a portal arrangement is one in which the axle tube and differential casing is above the center of the wheel hub to

enable a higher ground clearance, typically used in off-road vehicles. Per the teaching of the cited prior art, the applicant's description of a vehicle in which the axle is lower than the center of the wheel hub, such as is used by mass transit vehicles, is generally referred to as a low-floor or inverted portal arrangement. For the purposes of examination, the examiner has assumed that the applicant intended to claim a low-floor or inverted portal arrangement of a vehicle

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanzer et al. (6,095,005). Tanzer et al. disclose an axle assembly in inverted portal arrangement (for example, arrangement seen in figure 2) able to be used with a driven axle (for example, including #18, 20) of low floor vehicle having an axle housing (for example, including #68) with:

- Main drive (for example, including #10)

- Inverted portal drives (for example, including #76-80) fixed to both ends of the axle housing (only one end shown in detail in figure 2; both ends shown in figure 6)
- Wheel end drive assemblies (for example, including components on left side of assembly in figure 2) fixed to inverted portal drive houses (for example, including lower portion of #42 and portion of #56) and carrying vehicle wheel rims (for example, part of wheel/tire assembly #50, 55)
- Wheel braking means (details not shown; column 3, lines 46-48) connected to the wheel end drive assemblies
- An outlet of each inverted portal drive is connected to the vehicle wheel rims, respectively, by a hollow spindle (for example, including tubular shaft #44) rotatably arranged in a gear housing (for example, including #42) of each wheel end drive assembly by roller bearings (for example, including #46, 48) with conical rollers in a pre-stressed manner (can be seen in figure 2)
- The outlet of the inverted portal drive is formed as a driven gear (for example, including #82) connected in a torque transmitting manner to a splined outer surface (for example, including #84) of the hollow spindle at the vicinity of its end being opposite to the vehicle wheel rim (for example, right end of hollow spindle #44)
- First of the roller bearings (for example, #48) arranged on an end of the hollow spindle being in the vicinity of the vehicle wheel rim (left side in figure 2), and second roller bearing (for example, #46) arranged on another end of the hollow spindle being at the portal drive

11. Claims 1, 2, and 4-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Sullivan et al. (6,695,738). Sullivan et al. disclose an axle assembly in inverted portal arrangement (for example, #40 in figure 2) able to be used with a driven axle (axle not labeled, but can be seen in figure 2) of low floor vehicle having an axle housing (axle housing not labeled, but can be seen extending to the right side in figure 2) with:

- Main drive (not labeled)
- Inverted portal drives (for example, components on right side of assembly in figure 2) fixed to both ends of the axle housing (only one end shown)
- Wheel end drive assemblies (for example, including components on left side of assembly in figure 2) fixed to inverted portal drive houses (for example, including #42) and carrying vehicle wheel rims (wheel and rim detail not shown)
- Wheel braking means (for example, including #56, 60-62) connected to the wheel end drive assemblies
- An outlet of each inverted portal drive is connected to the vehicle wheel rims, respectively, by a hollow spindle (for example, including tubular shaft #64) rotatably arranged in a gear housing (for example, including #44) of each wheel end drive assembly by roller bearings (for example, including #54) with conical rollers in a pre-stressed manner (can be seen in figure 2)
- The wheel braking means (including #56, 60-62) are connected to the gear housing (including #44) of the wheel end drive assembly (can be seen in figure 2)
- The wheel braking means has a drum brake (for example, including #60) and a first arm (for example, including #56) holding a brake shoe (not labeled, but in a similar

location as brake shoe #30 in figure 1) and a second arm (not labeled, but extends from gear housing #44 in upper portion of figure 2, similar to applicant's second arm #126 in figure 2) pivoting a brake toggle (not labeled, but located near brake shoe in upper portion of figure 2, similar to applicant's brake toggle #127 in figure 2)

- First of the roller bearings (for example, #54 on left side in figure 2) arranged on an end of the hollow spindle being in the vicinity of the vehicle wheel rim (would be on left side in figure 2), and second roller bearing (for example, #54 on right side in figure 2) arranged on another end of the hollow spindle being at the portal drive

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (6,695,738). Sullivan discloses the outlet of the inverted portal drive being formed as a driven gear (for example, including #52) connected in a torque transmitting manner to an outer surface of the hollow spindle at the vicinity of its end being opposite to the vehicle rim (for example, right end of hollow spindle #64). While Sullivan et al. do not specifically designate the connection between the hollow spindle and the driven gear as being a splined connection, most gears in this configuration are connected to shafts in a splined manner so as to properly engage and move the shaft, and thus it would have

been obvious to one skilled in the art at the time that the invention was made to modify the outer surface of the hollow spindle of Sullivan et al. such that it comprised a splined surface as claimed. The examiner notes that Sullivan et al. do disclose a splined outer surface at #66, but it is unclear if this splined portion extends to the location where the driven gear engages the hollow spindle.

Allowable Subject Matter

14. None of the prior art of record appears to read on claims 7-10, as best understood by the examiner, and the subject matter of the claims appears to be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. However, upon applicant's amendment to overcome the rejections and objections raised by the examiner and upon the examiner's better understanding of the invention, a comparison of the prior art to the claim will again be made.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee, Wolansky, Maurer et al., Gazyakan et al., Varela et al., Bennet et al., and Boccenti each discloses an axle assembly for a low floor vehicle.

Singer discloses a height-adjustable axle assembly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura B. Rosenberg whose telephone number is (571) 272-6674. The examiner can normally be reached on Monday-Friday 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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1/9/06

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